

I. In the Claims

Please cancel claims 20-31.

Claim 32 (new) A vehicle braking system, comprising:

a forward rear axle of tandem axles on a tractor, said axle having a first service brake actuating chamber with a first diaphragm, said first diaphragm connected to a first brake actuating arm for engaging a first service friction device on said axle;

a rear rear axle of said tandem axles having a second service brake actuating chamber with a second diaphragm, said second diaphragm having a smaller area than an area of said first diaphragm, said second diaphragm connected to a second brake actuating arm for engaging a second service friction device on said rear rear axle;

a first control valve in fluid communication with both said first and said second diaphragms to displace said first and said second brake actuating arms and engage said first and said second service friction devices on said forward and said rear rear axles respectively; and

a second control valve, separate from said first control valve, wherein said second control valve provides less fluid pressure to said second brake actuation chamber than fluid pressure provided to said first brake actuating chamber by said first control valve, wherein said second control valve and said first control valve are located in series with one another, said first control valve being in direct downstream communication

with a reservoir, said second control valve reducing the braking force on said second friction device to reduce the temperature and wear on said second friction device.

Claim 33 (new) The apparatus of claim 32, wherein a displacement of said second brake actuating arm by said second diaphragm is less than a displacement of said first brake actuating arm by said first diaphragm.

Claim 34 (new) The apparatus of claim 32, wherein said first and said second brake actuating arms have a substantially equal length.

Claim 35 (new) The apparatus of claim 32, wherein said second brake actuating arm is shorter than said first brake actuating arm.

Claim 36 (new) A vehicle braking system, comprising:

a tractor comprising:

a forward rear axle of a tandem, said forward rear axle having a first service brake actuating chamber having a first diaphragm, said first diaphragm connected to a first brake actuating arm for engaging a first service friction device on said axle;

a rear rear axle of said tandem having a second service brake actuating chamber having a second diaphragm, said second diaphragm connected to a second brake actuating arm, said second brake actuating

arm being shorter than said first brake actuating arm, for engaging a second service friction device on said rear rear axle;

a first control valve in communication with both said first and said second diaphragms for individually engaging said first and said second diaphragms to displace said first and said second brake actuating arms and engage said first and said second service friction devices on said forward rear and said rear rear axles, respectively; and

a second control valve, separate from said first control valve, wherein said second control valve decreases the fluid pressure to said second brake actuation chamber so that it is less than the fluid pressure provided to said first brake actuating chamber by said first control valve wherein said second control valve and said first control valve are located in series with one another, said first control valve being in direct downstream communication with a reservoir, said second control valve reducing the braking force on said second friction device to reduce the temperature and wear on said second friction device.

Claim 37 (new) The apparatus of claim 36, wherein said second diaphragm has a smaller area than an area of said first diaphragm.

Claim 38 (new) The apparatus of claim 36, wherein a displacement of said second brake actuating arm by said second diaphragm is less than a displacement of said first brake actuating arm by said first diaphragm.

Claim 39 (new) A method of braking a tandem axle system, comprising:

braking a tractor comprising:

engaging a first service friction device on a forward rear axle of a tandem with a first brake actuating arm connected to a first diaphragm;

engaging a second service friction device on a rear rear axle of said tandem with a second brake actuating arm connected to a second diaphragm;

utilizing a first control valve, located in series with a reservoir, to provide a predetermined amount of pressurized fluid to said first diaphragm and said second diaphragm to engage said first service friction device and said second service friction device; and

utilizing a second control valve, located in series with said first control valve and said reservoir, respectively, to decrease the amount of pressurized fluid to said second diaphragm as compared to the amount of pressurized fluid provided to said first diaphragm to reduce the braking force on said second service friction device to reduce the wear and temperature on the second service friction device.

Claim 40 (new) The method of claim 39, wherein said second brake actuating arm is shorter than said first brake actuating arm.

Claim 41 (new) The method of claim 39, wherein said second brake actuating

arm provides a braking force to said second friction device less than a braking force said first brake actuating arm provides to said first friction device.

Claim 42 (new) The method of claim 39, wherein said second diaphragm has a smaller area than an area of said first diaphragm.

Claim 43 (new) The method of claim 42, wherein said second diaphragm displaces said second brake actuating arm a shorter distance than said first diaphragm displaces said first brake actuating arm.